

# Miniature Low Cost Non-Contact IR Temperature Sensor/Transmitter

OS101-MV-(\*)  
Basic Unit



- ✓ -18 to 538°C (0 to 1000°F) Measurement Range
- ✓ Adjustable Emissivity From 0.10 to 1.0
- ✓ Fast, Accurate, Repeatable Readings
- ✓ Type K Thermocouple, 0 to 5 Vdc, 4 to 20 mA or 1 mV/Deg Analog Output Models
- ✓ Rugged, Miniature Industrial Design with Remote Sensor Head
- ✓ User Adjustable High or Low Alarm Standard
- ✓ NEMA-4 Metal Housing
- ✓ Models with High Temperature Sensor Head Available (See "To Order" Notes)

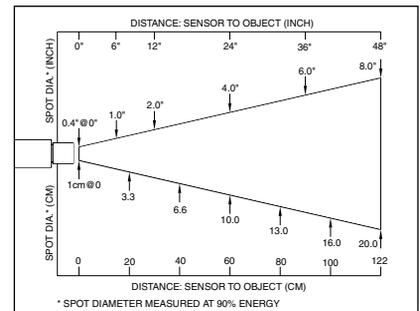


Strain relief port for power and output leads.

Shown smaller than actual size.



**Transmitter Output:** Type K thermocouple, 1 mV/deg, 0 to 5 Vdc or 4 to 20 mA; internal screw terminal connections  
**Electronics Housing:** NEMA-4, diecast aluminum  
**Sensor Head Cable Length:** 1.8 m (6') standard  
**Box Dimensions:** 11.4 x 6.3 x 3 cm (4.5 x 2.5 x 1.2")  
**Weight:** 300 g (0.6 lb)  
**Sensor Head:** 25 Dia. x 64 mm long (1 x 2.5") with 3/4-16 UNF thread



OMEGA's low cost OS100 Series mini infrared transmitter system features a remotely mounted infrared temperature sensor and high performance microprocessor based signal conditioner. The OS100's miniature sensor head design is ideal for measuring temperature in confined, hard-to-reach places and harsh environments. The sensor head is connected to the main electronics housing via a 1.8 m (6') shielded cable standard on all models. The signal conditioners main electronics are mounted in a rugged NEMA-4 rated diecast aluminum housing and feature adjustable emissivity, linear voltage, current or Type K thermocouple output calibrated for the temperature range of -18 to 538°C (0 to 1000°F). A user adjustable high/low alarm output is standard on all models.

## Specifications (Preliminary)

**Accuracy:** ±2% of reading or 2.2°C (4°F), whichever is greater  
**Repeatability:** ±1% of reading  
**Spectral Response:** 5 to 14 μm  
**Response Time:** 150 mSec (0 to 63% of final reading)  
**Emissivity Range:** 0.10 to 1.0  
**Field of View:** 6:1  
**Open Aperture:** 10 mm (0.4")  
**Ambient Operating Range:**  
**Main Electronics:** 0 to 50°C (32 to 122°F)  
**Sensor Head:** 0 to 70°C (32 to 158°F)  
**High Temp Sensor Head (-HT):** 0 to 85°C (32 to 158°F)  
**Power:** 12 to 24 Vdc  
**Temperature Range:** -18 to 538°C (0 to 1000°F)  
**Alarm:** Adjustable, open drain (100 mA)

## To Order

Model Number	Description
OS101-MV-(*)-**	Transmitter with 1 mV/°C or °F output
OS101-K-**	Transmitter with Type K output
OS101-V1-**	Transmitter with 0 to 5 Vdc output
OS101-MA-**	Transmitter with 4 to 20 mA output

Each OS101 comes complete with sensor head and 1.8 m (6') cable, sensor head mounting nut, main electronics housing and operator's manual.

(\*) Insert "F" for mV/°F or "C" for mV/°C output.

\*\* Insert "-HT" to model number for high temperature sensor head for additional cost.

**Ordering Example:** OS101-MA + OS100-LS + OS100-CA15FT, transmitter with 4 to 20 mA output, laser sighting accessory and 15' sensor head extension cable.

## Accessories

Model Number	Description
OS100-MB	Mounting bracket
OS100-DR	DIN rail mounting adaptor
OS100-AP	Air purge collar
OS100-WC	Water cooling jacket
OS100-LS	Laser sighting accessory
OS100-CA15FT	Sensor head extension cable, 4.6 m (15')
OS100-CA25FT	Sensor head extension cable, 7.6 m (25')
TX8-100	Power/output cable, 30 m (100')
PSR-24S	Regulated power supply, 24 Vdc, 400 mA, screw terminal
PSR-24L	Regulated power supply, 24 Vdc, 400 mA, UL, stripped leads
PSR-24L-230	Regulated power supply, 24 Vdc, 400 mA, stripped leads, 230 Vac input
PSU-93	Unregulated power supply, 16 to 23 Vdc, 300 mA max, screw terminal
CAL-3-IR	NIST traceable calibration